October 15, 1992

Mr. James Willis, Contract Officer U.S. Environmental Protection Agency 77 West Jackson Blvd. 5MCC-10J Chicago, IL 60604

RE:

U.S. EPA ARCS No. 68-W8-0079

Albion-Sheridan Township Landfill (11-5LAN)

Dear Mr. Willis:

The approved Work Plan for the Albion-Sheridan Township Landfill RI/FS included a contingency for performing a magnetometer and/or ground penetrating radar survey to more accurately determine the presence of buried drums. A copy of page 2-3 from the Sampling and Analysis Plan which includes the reference for this optional work is attached. The dollars and hours for this work are already included in the existing budget.

The EM survey has been concluded and areas of suspected buried steel debris has been identified. The Michigan DNR has requested and the RPM has confirmed the desire to exercise the option to perform the magnetometer survey in these areas to further define the presence and depth of this debris. As stipulated in the Sampling and Analysis Plan, we are requesting your authorization to conduct the magnetometer survey.

If you have any questions, please contact our office.

Sincerely,

WW ENGINEERING & SCIENCE

ARCS Program Management Office

Carl A. Malsom Program Manager

cc:

Pat Vogtman, PO, U.S. EPA

Mary Beth Novy, RPM, U.S. EPA

Reading File, 04011, 32

DC resistivity soundings will be conducted in those areas suspected of containing relatively deep disposal trenches or pits, as indicated by the EM data. A Bison Offset Sounding System (or equivalent) will be used to measure variations of apparent resistivity with depth. These data will be interpreted using a commercial software package by Interpes Limited to produce a layered earth model in order to estimate the depth-to-bottom of selected disposal areas. The number and location of resistivity soundings will be determined by the on-site geophysicist and will depend on results of the EM surveys and general data quality.

Suspected drum disposal areas, as indicated by the EM survey, may be surveyed using a magnetometer and/or ground penetrating radar to determine the presence of steel and possibly determine the depth of burial. Two additional days of field work have been budgeted for this contingency. This work will only be performed if approved by the U.S. EPA RPM and authorized by the U.S. EPA Contracting Officer. The methods employed and the extent of such surveys will be determined by the on-site geophysicist, based on EM results and site conditions.

2.2.2 CONTAMINANT PLUME IDENTIFICATION

A reconnaissance geophysical survey will be run in areas south and west of the landfill site in an attempt to delineate any contaminant plume migrating off-site (Figure 1). These areas have been selected based on an expected ground water flow direction to the south or southwest at the site. It is expected that a ground water contaminant plume containing a relatively high concentration of dissolved solids will be detected using electrical methods. EM-31 (shallow) and EM-34 (deep) profiles will be run along the additional reconnaissance survey lines indicated in Figure 1. Data will be collected continuously along these profile lines (total distance of 6,300 lineal feet). Any anomalous areas will be further investigated using either EM or DC resistivity sounding techniques. The number, location and type of sounding will be determined by the on-site geophysicist and will depend upon site conditions and anomaly characteristics.

2.3 LANDFILL CHARACTERIZATION AND LANDFILL COVER EVALUATIONS

2.3.1 LANDFILL CHARACTERIZATION

In order to characterize the composition of the landfill, samples from within the landfill area identified during the surface geophysical survey will be evaluated. Generally, samples from the landfill refuse will be collected with a split spoon sampler by boring through the refuse with hollow stem augers in accordance with WWES' "Split Spoon Sampling" and "Soil